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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,021	03/25/2002	Sebastien Weitbruch	PD990068	9015

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EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,021

Applicant(s)

WEITBRUCH ET AL.

Examiner

Dave Czekaj

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 2,4 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

On pages 3-4, applicant argues that Kawakami fails to disclose motion vector calculation in pixel resolution. While the applicant's points are understood, the examiner respectfully disagrees. See for example Kawakami column 28, lines 35-40. There Kawakami discloses calculating a motion vector in the pixel resolution. Therefore the rejection has been maintained.

On pages 3-4, applicant argues that Kawakami fails to disclose the discrete motion vectors have a more symmetrical arrangement with regard to the pixels on which they lie. While the applicant's points are understood, the examiner respectfully disagrees. See for example, Kawakami column 29, lines 5-23. There Kawakami discloses the process for determining the motion vector is done by calculating the average value of the pixels at a particular point. The examiner notes that by taking the average value, Kawakami is making the motion vector more symmetrical with regard to the pixels on which it lies. Therefore the rejection has been maintained.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. (6661470), (hereinafter referred to as "Kawakami").

Regarding claims 1 and 7, Kawakami discloses an apparatus that relates to a moving picture display apparatus that restrains false contour (Kawakami: column 1, lines 6-9). This apparatus comprises "the time duration of a video frame or field is divided into sub-fields during which the luminous elements can be activated for light emission in small pulses" (Kawakami: figures 39, 40, and 51, column 21, lines 34-38, wherein the small pulses are the pulses activated by the voltage, column 28, lines 1-30, wherein the video is divided into sub-fields), "motion vectors are calculated in pixel resolution further comprising performing correction of the video values for the pixels along the direction of the motion" (Kawakami: figures 7 and 20, column 28, lines 1-30, wherein the direction of motion is the motion pixels and moved direction, the correction of video values is the tone data correction), "if a calculated motion vector is not part of the restricted motion vector field, it is exchanged by a neighboring motion vector" (Kawakami: figures 15 and 40, column 12, lines 38-47, wherein the exchange of motion vectors is the adoption of values), and "the exchanged motion vector serves for calculating an optimized correction trajectory that determines at which pixel positions along the motion vector the correction values are placed for dynamic false contour compensation" (Kawakami: column 25, lines 38-46, wherein the pixel position is the path of shift of line of sight on the screen). Although Kawakami fails to disclose a motion vector field having discrete motion vectors having a more symmetrical arrangement as claimed, Kawakami does show discrete motion vectors having a more symmetrical arrangement (Kawakami:

figures 37, 40, and 43-44, wherein the motion vectors shown are more symmetric than pure interpolation). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement more symmetric motion vectors in order to obtain a better quality video signal by having more refined motion vectors.

3. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. (6661470), (hereinafter referred to as "Kawakami") in view of Sugiyama (6393059).

Regarding claim 3, note the examiners rejection for claims 1 and 7, and in addition, claim 3 differs from claims 1 and 7 in that claim 3 further requires rounding the motion vector components. Sugiyama teaches that rounding motion vector components results in a small amount of processed data (Sugiyama: column 8, lines 5-17). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kawakami and add the rounding technique taught by Sugiyama in order to obtain an apparatus that operates more efficiently by reducing the amount of data needing to be processed.

Regarding claim 5, Kawakami discloses "a correction for dynamic false contour effect is made by calculating correction values on signal amplitude level and distributing the correction values among a number of pixels located along a motion vector" (Kawakami: figures 2, 20, 37, 40, and 43-44, column 25, lines 38-46, wherein the pixel position is the path of shift of line of sight on the screen).

Allowable Subject Matter

4. Claims 2, 4, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJC


VU LE
PRIMARY EXAMINER